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UA66/3/2 Computer Science Alumni Newsletter, Vol. 10

WKU Computer Science

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Computer Science



WESTERN
KENTUCKY
UNIVERSITY®



VOLUME 10 FEBRUARY 1997

Alumni Newsletter

Computer Science Alumni Newsletter

Libra Thomas, Editor

Table of Contents

<i>Welcome</i>	1
<i>Parallel Programming Course</i>	2
<i>Curriculum Revision from PASCAL to C++</i>	3
<i>Telecommunications Course Update</i>	4
<i>Delphi(s) on Biterm</i>	4-5
<i>CS476 Does Roads</i>	5
<i>Voice Mail</i>	6
<i>Topline</i>	6-7
<i>Successful Sabbatical Leave</i>	8
<i>Professors Speak at Conference</i>	9
<i>Department Receives Grant</i>	9-11
<i>Carol Wilson Appointed to State Committee</i>	11-12
<i>Of Interest to Teachers</i>	12
<i>High School Programming Contest</i>	13
<i>CS Curriculum Accredited by CSAC</i>	14
<i>Outstanding Computer Science Majors</i>	14-15
<i>WKU CS Alumnus now WKU CS Faculty</i>	15-16
<i>ACM Active at WKU</i>	16-17

WELCOME

Art Shindhelm, Department Head
email:shindhelm@wku.edu

Welcome to the latest issue of the Alumni Newsletter. I was originally trying to have this out before Christmas but the best laid plans..... . There have been many changes in the Department and many events of importance that have occurred in the last year and a half. Hopefully this newsletter will bring you up to date on most of them.

Academically we received notification from the Computing Sciences Accreditation Board (CSAB) that we will have our Scientific/Systems Option reaccredited for the next six years. There are only two other schools in the state of Kentucky that have such an accreditation. This is good news to our students since it will potentially increase their marketability.

Focusing on faculty, Drs. Pigford and Baur were on sabbatical during the Spring, 1996 semesters. Dr. Robert Crawford will be on one during the Fall 1997 semester. Since the last newsletter we have lost one faculty member and gained another. Dr. Ali Kooshesh has resigned from the Department in order to teach full-time at Hendrix College in Conway, Arkansas. Dr. Thad Crews, Jr.(class of 1988) was hired in August. We have been given approval to hire an additional faculty member starting in the Fall '97.

The Alumni Newsletter is to contain Alumni news. Please take a moment using the enclosed, self-addressed questionnaire to tell us how you are doing and any special recent events. Thanks.

PARALLEL PROGRAMMING COURSE

Dr. John Crenshaw

During the 1996 Summer Session, the department offered a one-time course in Parallel Programming Principles, CS 475/G. The text for the course, **The Art of Parallel Programming**, by B.P. Lester, discussed parallel programming principles using a dialect of Pascal which contains additional commands to simulate parallel



processing. The text came with a compiler for the extended Pascal dialect on a diskette.

Students, therefore, were able to write "parallel" programs in



Pascal and have them run on an ordinary single-processor PC. An interesting feature of the extended Pascal was that the output of each program would include statistics on the run-time for the parallel version (assuming it were running on a multi-processor system with X CPUs) and the run-time for the sequential version of the same program. In this way, students were able to measure the speed-up which could be anticipated when various parallel features were added.

CURRICULUM REVISION FROM PASCAL TO C++

Dr. John Crenshaw

After a lengthy period of study and discussion, the Computer Science Department committed itself to converting from Pascal to C++ as the primary language in the curriculum. This conversion began with C++ being taught in CS240 during the Fall, 1996 semester. CS241 will be taught in C++ only beginning with the Spring, 1997 semester, with CS338 being converted in the Fall, 1997 term.



The current plans are to introduce object-oriented programming slowly. Objects and Classes will be introduced briefly in CS240 but emphasized more thoroughly in CS241. CS338 will be devoted to a deeper understanding of the OOP paradigm, with students designing and writing large systems in the OOP style.

An attempt has been made to strengthen the background of students in CS240 by requiring them to have passed CS230 or a departmental programming exercise prior to enrollment. The hope is that less time in CS240 will be spent on programming fundamentals.

Currently, the Unix system is being used as a platform for running C++. Except for some expected start-up glitches, the system has been extremely reliable.

TELECOMMUNICATIONS COURSE UPDATE

Dr. Greg Baur

Based on his study during his sabbatical leave during the spring semester of 1996, Dr. Greg Baur will be making substantial changes to the CS 450/G course, Telecommunications, to be taught next during the spring of 1997. Topics in the course will be modified and upgraded to include the latest in networking technology and the inclusion of high speed networks. Dr. Baur hopes to begin development of the integration of C++ concepts in the course as networks will be viewed from the object point of view.



DELPHI (S) ON BITERM

Dr. Bob Crawford

By student demand (extended lobbying, in fact), two biterm CS245 courses in Delphi were offered during the fall semester of 1996-Delphi and Advanced Delphi.

The first course covered the basics of programming in Delphi and an introduction to Windows programming and the underlying messaging system. The cap-off project for the first biterm was paint program. Nobody looked to be quite ready to challenge Corel Draw, but some of the efforts were quite sophisticated.



Advanced Delphi covered database programming with

Delphi (including a bit of SQL), component construction, and similar topics. For the final effort, students were allowed to propose any (sufficiently complex) project they liked. Results ranged from an electronic Rolodex program to internet applications.

CS476 DOES ROADS

Dr. Bob Crawford

During the spring semester of 1996, the CS476 class worked on a large scale database project for the Warren County Roads department. The work began with consultations with local officials to determine their needs. The initial model developed at that time was refined as the semester went along. The overall plan was quite extensive, involving everything from recording citizen requests taken by a receptionist over the phone to allowing import and export from the county's geographic information system.



This was the first class at WKU which used the Delphi development environment, so the students were exposed not only to the difficulties inherent in dealing with an actual customer, but also to the problems of programming in Microsoft Windows.

Needless to say, with so much new material to master, the project was incomplete when the semester ended. However, it provided an excellent starting point for further development of the system, and parts of it are currently in use.

VOICE MAIL
Ms. Mary E. Furnish

In an effort to enhance university communications, particularly with students and off-campus constituents, Western has purchased a new voice mail system from Lucent Technologies called **AUDIX**. In October, Western offered voluntary training on this new system to all faculty and staff. This system allows callers to leave a message when the university is closed or when a phone line is being used. This service is available to all Western departments with the 745 telephone prefix, including our Glasgow campus.



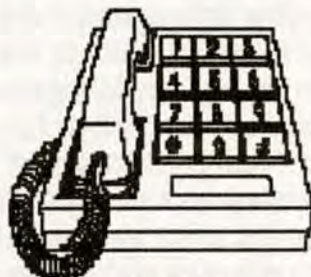
TOPLINE
Ms. Mary E. Furnish

In the Fall of 1995 the Registrar began implementing a touch-tone telephone registration program, TOPLINE. TOPLINE is easy to use, paperless, requires no training, has many features that are helpful to both students and faculty.

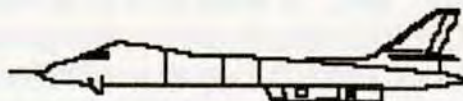
Gone are the days of waiting in line to register. Students can simply pick up the phone to register for classes, check grades, drop and add classes, and check for closed classes. The trial run began October 18, 1995 with 25% of the student body being allowed to register over TOPLINE

for the Spring 1996 semester. After a very successful trial run, all students were allowed to use TOPLINE beginning with registration for Summer 1996 classes. Freida Eggleton, Registrar, said, "At least 95% of all registration is done through TOPLINE." Ms. Eggleton also pointed out that some registration information is now available on-line through 'Western Online', the university's homepage. The information available includes lists of classes which are closed, restricted, canceled, and added after publication of the schedule bulletin. To view this information, go to 'Western Online' at <http://www.wku.edu>, click on 'Campus Info and Services', then click on 'Enrolling at Western', then click on 'Registration & Student Records', then click on 'Registration' and choose the desired information.

Faculty also benefit from this new paperless program. TOPLINE has been combined with the university computer system eliminating registration paperwork for faculty. Western has created two new screens inside the university computer system to allow faculty to input information into students' files so students can call TOPLINE and register for classes. Faculty can now get into students' files in the university computer system and mark them as advised instead of filling out green registration pass/advisor signature cards. Course passes/blue cards are also no longer needed since students can drop classes using TOPLINE, and faculty can, with department head consent, use the computer to allow students into closed and restricted classes.



SUCCESSFUL SABBATICAL LEAVE **Dr. Greg Baur & Dr. Darleen Pigford**



During the spring semester of 1996, Dr. Darleen Pigford and Dr. Greg Baur were granted a sabbatical leave to study the areas of distributed systems and high speed networks relative to multimedia applications. In addition to a great deal of reading in the areas, they were able to travel to see what other colleagues were doing in these areas. Their travels included visits to the University of Pennsylvania, Boston University, Massachusetts Institute of Technology, Washington University of St. Louis, and the Armstrong State University (Savannah, Georgia), and the Panasonic Corporation of America in Chicago.

All of the sites were actively engaged in the use of high speed networks and distributed networks in a number of applications. Of special interest were the transmission of multimedia applications over high speed networks. Both Drs. Pigford and Baur will continue to study the implications of what they saw during their visits and how their findings can be applied to the environment at WKU. Since WKU is moving towards a full campus network using the asynchronous transfer mode (ATM) technology, further study has a rich beginning.

**PROFESSORS SPEAK AT
CONFERENCE**

**Dr. Greg Baur & Dr.
Darleen Pigford**



Dr. Greg Baur and Dr. Darleen Pigford will be co-presenting two referred papers for the Tenth Annual Consortium for Small Colleges, Southeastern Conference in Johnson City, TN on November 8-9, 1996. The two papers reflect the collaborative efforts of the professors in "networking multimedia applications" during their sabbatical in the Spring of 1996.

One paper deals with the emerging technology of Asynchronous Transfer Mode and is entitled "An Introduction to ATM Technology" and the second co-authored paper covers the development of "Networked Multimedia Applications."

**DEPARTMENT RECEIVES \$67,678.00 IN
SOFTWARE FROM MICROSOFT INSTRUCTIONAL
LABORATORY GRANT**

Dr. Greg Baur & Dr. Darleen Pigford

Professors Pigford and Baur received software worth \$67,678.00 from the Microsoft Instructional Laboratory Grant Program of the Microsoft Corporation. The grant includes licensees for the following software for use in computer science laboratories and classes:

Windows 95

Visual Basic 4.0 Professional

Visual C++ Professional

Microsoft Visual Test 4.0

Microsoft Project for Windows 95 4.0

Visual Basic is currently being using in an introductory programming course and as a rapid prototyping tool in Software Engineering. The CASE tool Microsoft Project and the automated testing tool Visual Test will be incorporated into the department's two course sequence in Software Engineering. Visual Basic and Visual C++ are among the many languages studied in Programming Languages.



As agreed to in the grant proposal, Dr. Pigford and Dr. Baur are in the process of putting four coursed on the WEB to enhance the academic sharing of curriculum materials for the Microsoft Academic Cooperative. Check out

<http://www.wku.edu/~pigford>

for information on CS360/460/G Software Engineering I and II, CS389 Practicum in Computer Science, and CS444/G Programming Languages. The WEB design follows the required grant guidelines of

Catalog Description

Prerequisites

Instructor Information

Required Textbooks

General Objectives

Specific Objectives

Major Topics

Instructional Methods and Techniques

Assignments for the Course
Evaluation
Policies

The topics above will reflect the integration of the new software into the curriculum. The WEB site will be updated as the classes progress through the semester. Your feedback, comments, and suggestions as alumni would be appreciated. Contact Dr. Baur and Dr. Pigford at

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fax 1(502)745-6449

CAROL WILSON APPOINTED
TO STATE COMMITTEE
Ms. Carol Wilson

Because of her involvement with local, state, and national issues dealing with teacher education in computer science, Carol Wilson was tapped by the Kentucky Department of Education to serve on the Reading Committee for the Teacher Education Program Folios in Computer Science. The Educational Professional Standards Board (EPSB) has adopted performance-based accreditation standards and a new streamlined licensing system. All Kentucky institutions must submit a new folio for each program leading to a Kentucky teaching license under the streamlined system. Mrs. Wilson will be



reading the computer science folios from the 26 institutes of higher education in Kentucky.

OF INTEREST TO TEACHERS

Ms. Carol Wilson

In 1996, the Kentucky Department of Education radically modified and consolidated secondary certification into 5 broad categories: English, Social Studies, Mathematics, Physical Science, and Biological Science. Fortunately, the requirements to be endorsed to teach computer courses remained unchanged. There are still 2 endorsements in computer education:

AICA-Endorsement to Teach Computer Applications

S72-Endorsement to Teach Computer Science

Beginning in Spring '98, the AP Computer Science exam will be in C++ instead of Pascal. To help teachers prepare for the language change, Dr. John Crenshaw will be conducting an



AP Workshop in C++, June 22-28, at WKU. The cost of the workshop is \$300 for the week plus a housing cost of \$15/20 per night to stay in Gilbert Hall.

HIGH SCHOOL PROGRAMMING CONTEST

Ms. Carol Wilson

The annual High School Problem Solving Contest was held on March 26, 1996. Twenty eight teams competed this year with the following results:

School & Teacher

First Place	Webster Co.	-Team 1
	Paul Westerman	
Second Place	Nelson Co.	-Team 1
	Sheri McGuffin	
Third Place	Warren Central	-Team 2
	Judy Brooks	
Fourth Place	Warren Central	-Team 3
	Judy Brooks	

1 team solved 5 problems
3 teams solved 4 problems
3 teams solved 3 problems
5 teams solved 2 problems
7 teams solved 1 problem
9 teams solved 0 problems



CS CURRICULUM ACCREDITED BY CSAC

Dr. Art Shindhelm

The CS Department has received a six year accreditation of its Systems/Scientific Application Option by the Computing Sciences Accreditation Commission (CSAC). A team of reviewers visited the campus, reviewed course materials and texts used, as well as available equipment for both students and faculty. They talked with students, faculty and support personnel. After two and a half days on campus, they stated their preliminary findings, including their perceived deficiencies, which the department corrected. A final report was then submitted to the associated Board and voted on for accreditation purposes. From the three possible choices including six years, three years, or no accreditation, the Board awarded our department with the maximum amount of six years of reaccreditation.



OUTSTANDING COMPUTER SCIENCE MAJORS

Dr. Art Shindhelm

Every year the CS department votes on the outstanding CS major at the various levels of student development. These students receive a plaque at an

awards presentation in April as well as a complimentary membership to the national ACM organization. They are chosen by the CS faculty for excellence in scholarship among other criteria. The winners for 1997 are:

Outstanding Sophomore: Rickey Norvil
from Mt. Juliet, TN

Outstanding Junior: Karson Alford from
Roundhill, KY

Outstanding Senior: Gregory Hackbarth
from Bowling Green, KY

Outstanding Graduate Student: Sean Molley from
Marietta, GA



WKU CS ALUMNUS NOW WKU CS FACULTY

Dr. Thad Crews

Greetings fellow alumni. My name is Thad Crews and I earned my B.S. From Western in 1988. After working for Electronic Data Systems (EDS), I went to graduate school at Vanderbilt where I earned my M.S. And Ph.D. Degrees. In August 1996 I was hired as an assistant professor of computer science here at Western. This year I have taught Artificial Intelligence, Operating Systems, Computer Science III, as well as Freshmen level courses in computer literacy and introductory programming. My primary research interest is Intelligent Tutoring Systems and I am currently working with the Warren County School System to empirically evaluate learning software.



I am very happy to be back at Western. My wife and I have two young boys (age 22 months and four weeks). My father has been a professor at WKU for 25 years in the physical education department and is still going strong. (In fact, if you took a golf or bowling class when you were here, he may have been your instructor). The only problem we have is that we both have the same name and therefore our phone calls and E-mail messages sometimes go to the wrong place. For example, my E-mail address is *crews@wku.edu* and my fathers is *thad.crews@wku.edu*. Despite the occasional information misdirection, I am very happy to be at Western. The CS department is working hard to prepare students for the job market, including using C++ as our base language for instruction and providing exposure to a variety of hardware and software platforms. Let me also say that any suggestions you might have for our department based on your own experience would be appreciated and seriously considered. Please take the time to fill out and return the questionnaire included in this newsletter. We value your feedback.

ACM ACTIVE AT WKU

Dr. Thad Crews



The Association for Computer Machinery (ACM) is "an international, scientific and educational organization dedicated to advancing the art, science, engineering, and application of information technology, serving both professional and public interests by fostering the open interchange of information and by promoting the highest professional and ethical standards." WKU has an ACM Student Chapter whose aim is to enhance learning through the exchange of ideas among students and between

established professionals and students. Our local ACM chapter has been active this year with a variety of events. ACM has presented workshops on resume writing and HTML. Professional speakers for the year include presentations on Videoteleconferencing and Java programming (more on the Java later.) We have had social events such as a Christmas party and games nights. And we try to encourage programming skills by having local programming contests and participating in the ACM regional programming contest. This year we sent two teams to regionals, and our teams came in 4th and 6th place of the 22 teams at our satellite site which included teams from UK (two teams), U of L (two teams), Vanderbilt, EKU, and University of Evansville. (And they were this close to getting that one extra problem that would have sent them to nationals!)

Regarding our speakers, this April we will hear from Beth (Rush) Tibbetts who is a WKU alumnus from 1977 in math and computer science. Beth is currently a Software Developer/Analyst for IBM Research K-12 Education working with Java. ACM is always very pleased to have presentations from WKU alumni, and we would love to hear from you, too. If you are interested, please say so in the enclosed survey or send E-mail to crews@wku.edu. We will make every effort to have you in for a visit.

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